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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/392,626	09/09/1999	SHIN MOGI	35.C13816	1507

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EXAMINER

PHAM, HAI CHI

ART UNIT PAPER NUMBER

2861

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/392,626

Applicant(s)

MOGI ET AL.

Examiner

Hai C Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE (12/09/04) & Amendment (11/12/04).
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27, 29 and 32-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27, 29 and 32-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Request for a Continued Examination

1. The request filed on 12/09/04 for a Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/392,626 is acceptable and a RCE has been established. An action on the RCE follows.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 27, 29, 32, 34-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Asami et al. (JP 10-10447).

Asami et al. discloses a multi-beam scanning apparatus comprising a light source unit (multi-beam light source unit 12) comprising a laser light source (laser 22a), a holder (21) holding said laser light source and a driving circuit board (6) for driving said laser light source, said laser light source including a laser chip having a plurality of emission points (22b, 22b) for emitting laser beams and a terminal for energizing the laser chip, said driving circuit board being connected to the terminal of said laser light source (leads of the laser light source connected to the drive circuit board 6, as depicted in Fig. 6), scanning means (rotary polygon mirror 14 and scanning lens 16) for scanning

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a surface (photosensitive body not shown) to be scanned with the laser beams emitted by said light source unit, a housing (optical box 11) having a wall (side surface 11b), wherein said housing contains said scanning means and supports said light source unit on the wall (Figs. 1 and 2), wherein said holder has a reference portion (upper edge/surface of the laser holder 21) and said laser light source is fixed to said holder (Fig. 2) such that a hypothetical straight line connecting the plurality of emission points (22b, 22b) is inclined with respect to the reference portion so as to have an inclination angle equal to or close to a predetermined angle (the laser chip 22a having the two emission points 22b and 22b aligned in an inclined hypothetical straight line forming an angle with the horizontal line as displayed in Fig. 3, the horizontal line being parallel to the upper edge/surface of the laser holder 21 as displayed in Fig. 4, such that an interval P between the two emission points is obtained), and wherein said holder holding said laser light source is fixed to the wall of said housing after the inclination angle of the hypothetical straight line is finally adjusted by moving said holder (the laser holder 21 is first temporarily fixed by screws 23 into screw holes 11c of the side wall 11b of the optical box 11, the laser chip 22 is then rotated about the optical axis B to adjust the scanning line spacing, and then the laser holder is rotated in the range of the screw through-hole 21d so that the scanning line spacing becomes the prescribed value P, and the screw 23 is firmly tightened after the final adjustment) (English translation, paragraph [0012]).

Asami et al. further teaches:

- the driving circuit board (6) having a rectangular shape (Fig. 6),

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- the plurality of emissions points (22b, 22b) of said laser light source is arranged linearly (Fig. 3),
- said laser light source unit comprising a collimator lens (not shown) for collimating the laser beams emitted from said laser light source and a lens barrel (24) holding said collimator lens, said lens barrel being integrated with said holder (Fig. 2) (English translation, paragraph [0011]),
- said laser light source is a multi-beam semiconductor laser (22a),
- said scanning means comprises a rotary polygon mirror (14) for deflecting the laser beams emitted from said laser light source unit and an imaging lens (scanning lens 16) for focusing the laser beams deflected by said rotary polygon mirror (Fig. 1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asami et al. in view of Nakajima et al. (U.S. 5,999,345).

Asami et al. discloses all the basic limitations of the claimed invention except for the multi-beam semiconductor laser having a plurality of two-dimensionally arrayed emission points.

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However, it is well known in the art that the selection of one-dimensional or two-dimensional array lasers in an optical scanning device would be a matter of design choice to fit a specific requirement. Nakajima et al., for example, discloses a laser holder that can support a one-dimensional or two-dimensional laser array while allowing the adjustment of the distance between the multiple laser beams (Figs. 1, 3, 5 and 6).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the laser holder of Asami et al. to hold a plurality of two-dimensional laser arrays as taught by Nakajima et al. The motivation for doing so would have been to increase the printing speed of the laser printer. Moreover, the implementation of such laser holder would involve only routine skill in the art.

Response to Arguments

6. Applicant's arguments with respect to claims 27, 29 and 32-36 have been considered but are moot in view of the new grounds of rejection presented in this Office action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L Talbott can be reached on (571) 272-1934. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HAI PHAM
PRIMARY EXAMINER

February 3, 2005